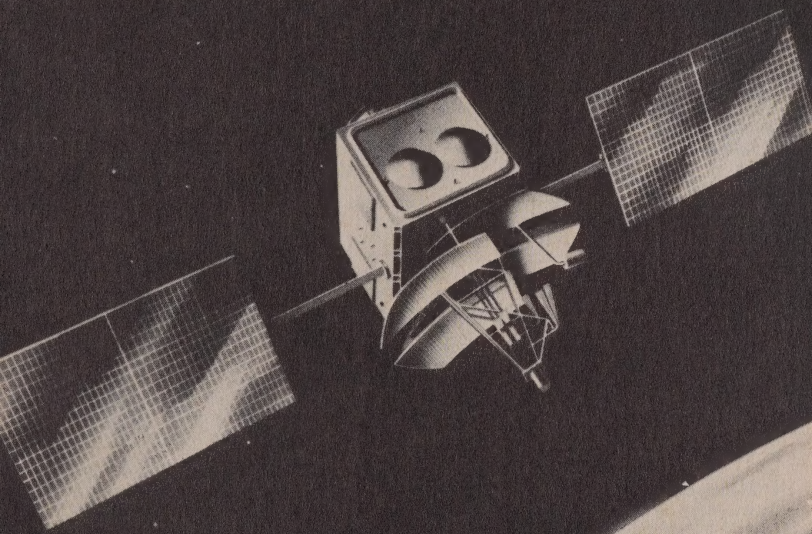
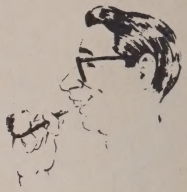
SPTS — '80

July 4-6, 1980
Hyatt San Jose
SAN JOSE, CALIFORNIA



Your Hosts: Bob & Susan Cooper
Satellite Television Technology

MESSAGE FROM COOP



Quite a few of you have attended the two previous **Satellite Private Terminal Seminars** (Oklahoma in August of 1979, Miami in February of 1980). Susan and I look forward to seeing you at each SPTS and we welcome both the first-timers and the old-timers back to San Jose!

This one is different. First we have some 30 or so exhibit booths with more new hardware than you can shake an LNA at. Most of it I have not seen prior to this show and we'll have to pass judgement, as you do, after carefully inspecting all of the new receivers, antennas...and yes, LNAs. We'll have reports for you in the August and September issues of **CSD**. I was certain that by this show **some** manufacturers would have discovered how to turn out this equipment in quantity. I still feel what we need most in this industry is lots of hardware making the trek from manufacturer to dealer to user. In spite of the quantity of different **designs** on display here, I am still not pleased with the quantities available for shipment.

I hope you brought along a video tape recorder! As this program lists, there are more than 70 hours of satellite-related television programming going out through the Hyatt MATV system starting at 7 PM on the 3rd. And this is on two different channels (8 and 9 if everything works properly!) Additionally, announcements for the SPTS gathering will be found on channel 10. This time you have access to so much material that it will take you weeks to digest and file it all away.

'Live' sessions are scheduled Friday the 4th and Sunday the 6th. Saturday is a special day when you can carefully browse the booths, the large number of antennas scattered all over the Hyatt lot, and participate in small group discussions scheduled. Additionally, there will be an important meeting of SPACE on the grounds on Saturday.

There are many sets of special instructions in this program so please take the time to study it carefully. Our central booth will be available to answer your questions at most hours so don't hesitate to ask.

This final note. Check TV channel 10 in your room every now and again. If we have program schedule changes (and that is always possible) this is where they will be posted. And catch the **'Today At SPTS'** program each morning (Friday, Saturday and Sunday) at 8 AM on both channels 8 and 9 to find out the latest happenings at SPTS San Jose!

Bob and Susan Cooper
Satellite Television Technology
P. O. Box G
Arcadia, Oklahoma 73007
[405-396-2574]

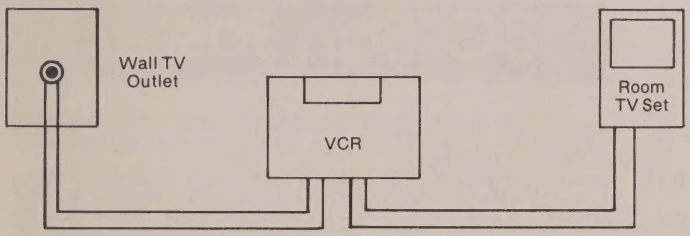
July 4-6, 1980
Hyatt San Jose
SAN JOSE, CALIFORNIA

SPTS '80 RULES

TV PROGRAMMING

Special satellite TV programming, related to technical and programming aspects of this business, is scheduled over more than 70 hours starting at 7 PM the 3rd. There are two channels of service; TV channel 8 and TV channel 9 on your room set. You may have to fiddle with the fine tuning on both channels to get it to track right. If you have a **severe** problem call the front desk. Also on channel 10 is our character generator announcements; any changes in the program schedule will be posted here.

The TV programming being fed via the twin channels is available for you to watch or tape or both. To hook up your VCR follow the simple connection shown here routing the cable from the wall plate to your VCR tuner input and a second jumper (**you provide one of these**) from the VCR RF output back to your TV set. **PLEASE** - return the Hyatt's jumper to their TV set (from the wall plate) **when you leave**! Set your VCR to either channel 8 or 9 and tape away!



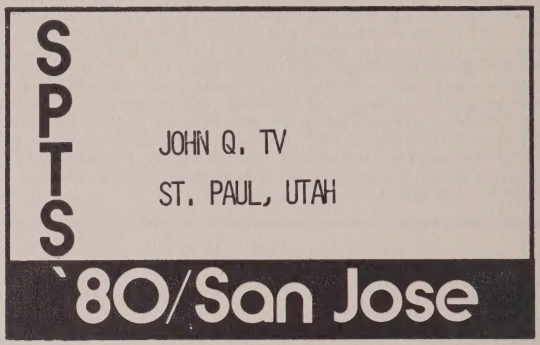
Jumper cable (you provide) will connect room TV outlet jack to your VCR. Existing jumper can then be used to connect output of VCR to your room TV. Set VCR to Channel 8 or 9 (per program Schedule) to tape.

The TV programming consists of more than 40 hours prepared by STT from SPTS '79, SPTS Miami and other sources. **Not everything is serious**...the 12 midnight show Friday night (Saturday morning) may even make you laugh! (**NOTE:** We suggest you **not** watch this with anyone under the age of 16.)

SPTS - 80

Please note following:

1)You **MUST** have your registrant badge on to gain entrance to the exhibit hall. Spouse badges for **Saturday Only** will be available Saturday morning from 8 AM to 10 AM in the central SPTS registration area (adjacent to the pool). **AGAIN - badges must be worn at all times!**



2)All personnel (including exhibit personnel) must be out of the exhibit areas by 10 PM on the 3rd, 8 PM on the 4th, 10 PM on the 5th. The areas will be under a security service after these hours.

Booths 1 through 18 are located in the **Governor's House**; the 'U' shaped building south of the pool area. **Booths 19-29** are located on the west wing of the main building adjacent (north of) the pool side putting green/miniature golf course. **Booths 30-32** are located adjacent to the pool in the covered Cabana area. STT's SPTS San Jose control center is also here. There are also five exhibit suites. **Suite 302** is on the ground floor of the 300 building (SE of the pool). **Suite 402** is on the ground floor of the 400 building, SW of the pool (to the right behind Governor's House). **Suite 502** is located on the ground floor of the 500 building, to the far right past the putting green. **The Regency Suite** is on the ground floor of the 700 building (back behind the large antenna 'farm' on Peach Tree Lane). **The Los Angeles Suite** is located on the ground floor of the 600 building. Those exhibitors with suites have been allowed to set up their own 'open hours' which may differ from the general hours; each will have it posted.

SPECIAL SATURDAY SCHEDULE

Saturday you are 'on your own' with lots of possible things to do. For example, as the Television Programming Schedule lists there is more than 36 hours of programming scheduled on channels 8 and 9 that day. All 12 hours of the **H. Paul Shuch** Satellite Symposium will run that day. This is the big exhibit day as well. And this is also the day when we will be experimenting with direct **Russian Molniya** reception with the test set up in the pool area.

Additionally, there are two meeting areas only in use for Saturday. One is called 'Woodside III' and this is located adjacent to booths 19-29. The other meeting area is outside on the grass area between the Governor's House and the 300 building. Chairs and a podium will be set up there Saturday. The concept is that you will have the opportunity to sit in as you wish on these special sessions, talk with the session leaders, and ask questions. Most of the sessions are **not** formal programs; they are simply scheduled to allow you to get close to equipment and people you might not otherwise have the opportunity to see 'up close'. The Saturday sessions schedule is as follows:

Woodside Number III	**Time**	**Outdoor Area**
Special **SPACE** Breakfast (by invitation)	8 AM	
Single Conversion	10 AM	**Satellite Navigation**
Dealer Use (reserved)	12 N	**TVRO Antenna Design**
Dealer Use (reserved)	2 PM	
Dealer Use (reserved)	4 PM	**SPACE** Organizational Meeting
Low Cost LNAs	7 PM	

If all of the pieces fall into place, a special 11 foot (ADM) antenna set up poolside will bring in Russian MOLNIYA reception starting around 1:30 PM Saturday. The Russian 'Good Morning Siberia' newscast sent to Siberia via MOLNIYA should be visible at 2 PM Saturday at this site.

THE EXHIBITORS

EXHIBIT AREAS

Exhibits are spread out because there is so much hardware involved in this SPTS. The exhibits will be open **only** during the following hours:

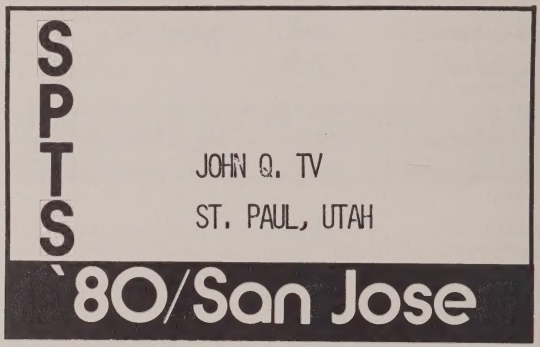
FRIDAY, JULY 4th: Open only from 12 noon to 2 PM (between breaks in the live program) and 5 PM to 7 PM.

SATURDAY, JULY 5th: This is exhibit and demonstration and experiments day. Formal exhibit hours are 10 AM to 12 noon, 2 PM to 5 PM and 7 PM to 9 PM.

SUNDAY, JULY 6th: Exhibits will be open from 12 noon to 2 PM.

Please note following:

1)You **MUST** have your registrant badge on to gain entrance to the exhibit hall. Spouse badges for **Saturday Only** will be available Saturday morning from 8 AM to 10 AM in the central SPTS registration area (adjacent to the pool). **AGAIN - badges must be worn at all times!**



From the first SPTS last August with 8 exhibits to the San Jose SPTS, this industry has grown very rapidly. There are many new TVRO receivers at SPTS plus numerous new antenna and antenna mount systems. Virtually all exhibitors are very interested in locating and signing up new **'Dealers'** for their products and if you are here to investigate the growth of this new service and considering becoming a dealer for satellite TV hardware, you are at the right place!

Please note that exhibits are spread through seven buildings (including the five exhibit suites) and **make it a point to get out of the central area** where the largest number of exhibits are located to visit the five suites in the 300, 400, 500, 600 and 700 buildings. Also note that antennas are here in the central courtyard **as well as** on Peachtree Lane (between 300 and 600 building) **as well as** along the east side of the 600 building. Everyplace you turn there are TVRO antennas!

BOOTHS 1-9 (located in Governor's House, left hand side as you enter):

Booth # 1 **DEXCEL, Inc.**, 2285-C Martin Ave., Santa Clara, CA 95050 (408-727-9833) Art Kawai, Mike Fornaciari, Yozo Satoda. LNAs.

Booth # 2 **AVCOM of VIRGINIA, INC.**, 10139 Apache Rd., Richmond, VA 23235 (804-320-4439). Andy Hatfield, Pat Hatfield, John McLean. TVRO receivers, systems.

Booth # 3 **MICROWAVE GENERAL**, 2680 Frontage Rd., MS 210, Mtn. View, CA 94043 (415-969-3355). Chuck Colby, Don Koijane, Carol Colby. TVRO systems.

Booth # 4 **VIDIARK Electronics Development Co.**, P. O. Box 57, Salem, Ark. 72576 (501-895-3167). Monty McCullough, Hayden McCullough, David Brough. 8-Ball Spherical Antenna.

Booth # 5 **CHAPARRAL Communications Co.**, Box 832, Los Altos, CA 94022 (415-941-1555). Robert B. Taggart. TVRO Antennas, feeds.

Booth # 6 **ICON Electronics Co.**, 333 McPhillips St., Winnipeg, Manitoba R3E 2K9 (204-284-1703). Willard Elliot, Peter Semotiuk. TVRO hardware.

Booth # 7 **HUBBARD Telephone Contractors, Inc.**, Suite 113, 4811 CLinton Hwy., Knoxville, TN 37912 (615-688-6261). Ralph P. Payne, William P. Payne, Bill Daly. TVRO systems.

BOOTHS 10-18 (located in Governor's House, right hand side as you enter):

Booth #12 **NELSON ETHIER**, 1189 Van Horne Avenue, Outremont, Quebec H2V 1K1. (514-337-7255). TVRO antennas, antenna molds, mounts, feeds.

Booth #13 **LINDSAY SPECIALTY Products Ltd.**, 50 Mary St. W, Pindsay, Ontario Canada. John Thomas, H. Hoster, Mrs. H. Hoster. TVRO antennas, systems.

Booth #14 **RAMSEY Electronics**, P. O. Box 10101, Rochester, N.Y. 14610 (716-586-3950) John Ramsey, TVRO receiver hardware, circuit boards, parts.

Booth #15 **SAT-TEC**, P. O. Box 10101, Rochester, N.Y. 14610 (716-381-7265). John Ramsey, TVRO receivers.

Booth #16 **SATELLITE SUPPLIES, INC.**, Box 278, Aldergrove, B.C. VOX 1AO. (604-859-6315). J. R. Walsh, Peter Cook, H. T. Howard. TVRO receivers, systems.

Booth #17 **VITALINK Corp.**, 701 Welch Rd., #225, Palo Alto, CA 94304. (415-328-9972). Albert Hurley, James Janky, Steven Russell. TVRO systems.

Booth #18 **SATELCO**, 5540 W. Pico Blvd., Los Angeles, CA 90019 (213-931-6274). Sam Kleinman, Leana Kleinman, Rony Cohen. TVRO systems.

BOOTHS 19-29 (located in the Woodside Building, wing of main building)

Booth #19 **AMPLICA, Inc.**, 950 Lawrence Drive, Newbury Park, CA 91320. Jim Cole, Colin Carnegie, Jerry Moore. LNAs.

Booth #20 **HOWARD/COLEMAN**, RFD 3, Box 58-A, Travelers Rest, S.C. 29690. Taylor Howard, Annie Howard, Robert Coleman, Lib Coleman. TVRO circuit boards, parts.

Booth #21 **TELEMETRY COMMUNICATIONS and INSTRUMENTATION, CORP. [TCI]**, 411 N. Buchanan Cr., #3, Pacheco, CA 94553 (415-676-6102). C. E. Green, L. K. Stierna, Alan Swan. Swan TVRO antennas, TVRO receivers and systems.

Booth #22 **AVANTEK**, 3175 Bowers Ave., Santa Clara, CA 95051 (408-727-0700). Gary Irvine, Kenneth McKean, Jim Lindauer. LNAs.

Booth #23 **INTERNATIONAL CRYSTAL MFG. CO. / ICM**, 10 North Lee, Oklahoma City, OK 73102 (405-236-3741). Royden Freeland. TVRO receivers.

Booth #24 **ROHNER & ASSOCIATES**, 7th & Elm Streets, West Liberty, IO 52776 (319-627-4819). John Rohner, Steve Chambers. TVRO receivers, LNAs, circuit boards, sub-carrier detectors.

Booth #25 **WAGNER Industries, Inc.**, Box 559, Alva, OK 73717 (405-327-1877). David M. Wagner, Linda K. Wagner, Kenneth R. Ray. Spherical TVRO antennas.

Booth #26 **WASHBURN Receiver**, 195 Thayer Rd., Fairport, N.Y. 14450 (716-223-2073). Clyde Washburn, TVRO receivers.

BOOTHS 30-32 (Outside, adjacent to pool deck under Cabana)

Booth #30 **STAR - Satellite Television Systems**, P. O. Box 51837, Lafayette, LA 70505 (318-234-2495). Eugene L. Martin, Ted Spillers, Aaron Jortner. TVRO antennas, motorized mounting systems, complete systems.

Booth #31 **ADM - Antenna Development & Mfg. Co.**, P. O. Box 1178, Poplar Bluff, MO 63901 (314-785-5988). James Gowen, Linda Gowen. TVRO parabolic antennas, systems.

Booth #32 **STT - Satellite Television Technology**, P. O. Box G, Arcadia, OK 73007 (405-396-2574). Susan Cooper, Bob Cooper, Gary Willhoite, Rick Schneringer, Gloria Schneringer, Beth Durrer. **CSD**, TVRO video tapes, TVRO manuals, Satellite Study Package, SPTS.

SUITES (located in the building blocks noted; all are on bottom floor of each building).

Suite 302 **SATRX**, 250 Kawaihae St., Mt. Terrace (Suite 8-A), Honolulu, HA 96825 (808-377-6195). Barney L. Phillips. TVRO receiver.

Suite 402 **MICROWAVE ASSOCIATES COMMUNICATIONS CO.*** Firm Caller 535, Burlington, MA 01803 (617-272-3000; extension 1885). J. 'Duke' Brown, C. Stanton, M. Smith. TVRO Systems.

Sujite 502 **STS - Satellite Television Systems, Inc.**, R #1, Box 132B, Poplar Bluff, MO. 63901 (1-800-325-0761). Danny Hogg, Roger Hogg, Melissa Hogg, Vicki Hogg. TVRO systems.

Regency Suite **H & R COMMUNICATIONS**, Route 3, Box 103G, Pocahontas, ARK 72455 (501-647-2001). John Hastings, Virgil Richardson, Randel Odom. TVRO antennas, mounting systems, receivers, systems, LNAs.

Los Angeles **THE SOUND COMPANY**, 4676 Admiralty Way, Suite 732, Marina Del Rey, CA 90291 (213-777-7737). Joe Miyasaki, Richard Lee, Raoul F. Balcaen. TVRO receiver, TVRO systems.

TV SYSTEM PROGRAM SCHEDULE

ON THE TUBES...

NOTE: TV Program starting times at 7 PM, 11 PM, 7 AM, 9 AM, 1 PM, 5 PM and 9 PM are accurate. Other segments **after initial starting time** will generally start earlier than shown so do **not** rely on exact times for programming VCR timers!

THURSDAY

THURSDAY — JULY 3rd Television Program

8	7 PM	**Private Terminal Marketing** / Dick Campbell, S-A
	8 PM	**Private Terminal Marketing** / Clifton Gardiner
	9 PM	**Assessing Private Terminal Marketplace** (SPTS Miami)
	10 PM	**MDS/Cable Interconnection** (SPTS Miami)
	11 PM	**Bob Cooper Interviews David Brough** (Sat Mag)
9	7 PM	**LNA Installation Considerations** (CCOS 78)
	8 PM	**LNA Design and User Parameters** (SPTS 79)
	9 PM	**LNAs and Front End Technology** (SPTS Miami)
	10 PM	**How The [Satellite] Bird Flies** (HTS-4)

FRIDAY

FRIDAY — JULY 4th Television Program

8	7 AM	**First Amateur Uplink** (Sat Mag)
	8 AM	**'Today At SPTS'** (live)
	9 PM	**TVRO Antennas / Design & Construction** (SPTS 79)
	11 PM	**Design & Operation Small TVRO Antennas** (SPTS Miami)
	12 N	**SPTS San Jose Triple SSS Rated Show**
9	7 AM	**Alternate Technology** (Kinik, Shuch)
	8 AM	**'Today At SPTS'** (live)
	9 PM	**Future Low Cost Terminals/Legal Problems** (SPTS '79)
	10 PM	**Regulation of Satellite TV Reception** (SPTS Miami)
	11 PM	**Road Ahead - Formation of Space** (SPTS Miami)
	12 M	**SPTS San Jose Triple SSS Rated Show**

SATURDAY

SATURDAY — JULY 5th Television Program

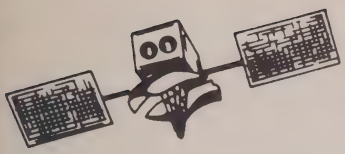
8	7 AM	**2/2.5 GHz Reception Techniques** (SPTS '79)
	8 AM	**'Today At SPTS'** (live)
§	8:45	**Hardware Wars**
	9 AM	**Introduction to TVRO Technology** (Shuch)
	10 AM	**Antenna, LNA Selection** (Shuch)
	11 AM	**Superheterodyne Downconversion** (Shuch)
	12 N	**The Modulator [TVRO] Receiver Approach** (Shuch)
	12:40	**Rod Wheeler Interview** (CCOS 78)
	1 PM	**Scattering Parameters** (Shuch)
	2 PM	**Analytic Amplifier Design** (Shuch)

	3 PM	**TVRO Test Equipment & Procedures** (Shuch)
	4 PM	**Basband Processing Circuitry** (Shuch)
	4:30	**Cable News Network 1st Broadcast**
	5 PM	TVRO System Summary **[Shuch]**
	6 PM	**Admittance, Impedance & Complex Numbers** (Shuch)
	7 PM	**Microstrip Transmission Lines** (Shuch)
	8 PM	**Time & Frequency Domains** (Shuch)
	8:30	**Steve Birkill Interview** (CCOS 78)
	8:45	**Hardware Wars**
	9 PM	**Coleman TD-2 Terminal Visit** (STT)
	10 PM	Swan Spherical TVRO Visit **[STT]**
9	7 AM	**Washburn TVRO Receiver** (SPTS Miami)
	8 AM	**'Today At SPTS'** (live)
	8:45	**Hardware Wars**
	9 AM	**New Breed TVRO Receivers** (CCOS 78)
	10 AM	**Traditional TVRO Receivers** (CCOS 78)
	11 AM	**System Design Considerations** (CCOS 78)
	12 N	**Interference & Terrestrial Studies** (SPTS 79)
	12:30	**Terrestrial Interference** (SPTS Miami)
	1 PM	**Geo-Stationary System** (Howard from 10 AM 7-04)
	2 PM	**TVRO Legal Problems** (Brown from 11 AM 7-04)
	3 PM	**4 GHz Active Mixers** (Shuch from 2 PM 7-04)
	4 PM	**4 GHz Strip Line Techniques** (from 3 PM 7-04)
	5 PM	**4 GHz Single Conversion** (from 4 PM 7-04)
	6 PM	**Mass Production Receiver Techniques** (from 2 PM 7-04)
	7 PM	**Satellite Navigation** (from 3 PM 7-04)
	8 PM	**Parabolic Antenna Design** (from 4 PM 7-04)
	9 PM	**4 GHz LNA Techniques** (from 7 PM 7-04)
	10 PM	**4 GHz LNA Techniques #2** (from 8 PM 7-04)
	11 PM	**Spherical TVRO Antennas** (from 8 PM 7-04)
	12 PM	**Planning Private Terminal Installation** (from 7 PM 7-04)

SUNDAY

SUNDAY — JULY 6th Television Program

8	7 AM	**Molniya Reception Report** (STT)
	8 AM	**'Today At SPTS'** (live)
	12 N	**Swan Spherical TVRO Visit** (STT)
	3 PM	**Robert Coleman Terminal** (Sat Mag)
	4 PM	**NCTA Visions 79** (Sat Mag)
	5 PM	**World Of Amateur Radio** (ARRL)
	6 PM	**FCC Approval Non-Licensed TVROs** (FCC)
	6:30	**CATV Field Strength Meters** (NCTI)
	7 PM	**Ted Turner at CCOS** (CCOS 78)
	7:30	**Cooper Family Visit** (STT)
9	7 AM	**Various Satellite Promotional Tapes**
	8 AM	**'Today At SPTS'** (live)
	12 N	**S/A Private Terminal Announcement** (Sat Mag)
	1 PM	**Taylor Howard Terminal** (Sat Mag)
	3 PM	Digital/Synthesized Receivers (from 9 AM 7-06)
	4 PM	Lightweight, Portable Antennas (from 10 AM 7-06)
	5 PM	Robert Coleman (from 11 AM 7-06)
	6 PM	How Dealers Represent Service (from 9 AM 7-06)
	7 PM	Development of 12 GHz Systems (from 10 AM 7-06)
	8 PM	SPACE Platform Meeting (from 11 AM on 7-06)
	9 PM	Final Wrap-Up Session (from 2 PM 7-06)



LIVE LECTURE SCHEDULE

LIVE SESSIONS

The hours for 'live' sessions are as follows:
FRIDAY, JULY 4th: 10 AM to 12 noon; 2 PM to 5 PM; 7 PM to 9 PM.
SUNDAY, JULY 6th: 9 AM to 12 noon; 2 PM to 3 PM.

With the exception of July 4th from 10 AM to 12 noon, and July 6th from 2 PM to 3 PM, all session hours will be 'split'; that is, there will be **two simultaneous sessions** going on at once. We call them (to keep them straight) the 'Technical Sessions' and the 'Not SoTechnical Sessions'. Keep in mind that **all** Friday sessions **will be played back** on MATV channel 9 on Saturday the 5th (see schedule) while all Sunday sessions will be played back later that day on MATV channel 9. Thus those sessions you do not attend you can pick up 'tape delayed' or tape yourself as you wish.

FRIDAY

FRIDAY, JULY 4TH:

9:55 AM In the Mediterranean Center (far back of facility on south side), introductory remarks by Bob and Susan Cooper.

10:00 AM Med Center, Taylor Howard **'The Geostationary Satellite System'**

11:00 AM Med Center, Richard L. Brown (General Counsel for SPACE) **'How Legal Is What You Are Doing???'**

2:00 PM Med Center Number (left hand side) H. Paul Shuch **'4 GHz Active Mixer Design'**
Med Center (Right hand side) **'Mass Production Receiver Techniques'** with Taylor Howard, John Ramsey

3:00 PM Med Center (left hand side) **'4 GHz Strip Line Techniques'**, Steve Chambers and John Rohner
Med Center (right hand side) **'Satellite Navigation'**, Stephen Gibson

4:00 PM Med Center (left hand side) **'4 GHz Single Conversion Techniques'**, David Barker and Norman Gillaspie
Med Center (right hand side) **'Parabolic Antenna Design and Assembly'**, Nelson Ethier

7:00 PM Med Center (left hand side) **'4 GHz LNA Design and Construction'**, Bob Luly and Nelson Ethier
Med Center (right hand side) **'Considerations For Planning The Private TVRO Installation'**, Clyde Washburn

8:00 PM Med Center (left hand side) **'Commercial LNA Trends'**, a panel of commercial suppliers hosted by Taylor Howard
Med Center (right hand side) **'Spherical TVRO Antenna Design and Operation'**, Hayden McCullough

SUNDAY

SUNDAY, JULY 6TH:

9:00 AM	Med Center (left hand side) **'Digital-Synthesized TVRO Receiver Design'**, John Rohner Med Center (right hand side) **'Getting Started As A TVRO Dealer/ Distributor'**, Marty Lavin (Videophile/Denver), George Jones (American Value, Inc.)
10:00 AM	Med Center (left hand side) **'Lightweight, Transportable TVRO Antenna Designs'**, Bob Luly Med Center (right hand side) **'Development of the 12 GHz DBS Systems'**, James Janky
11:00 AM	Med Center (left hand side) **'Hints & Kinks For Improved TVRO System Performance'**, Robert Coleman Med Center (right hand side) **'Protecting Ourselves From Ruinous Legislation'**, Richard L. Brown, General Counsel, SPACE.
2:00 PM	Med Center (full facility) **'OK - So What Have We Learned Here???'**, a wrap-up panel hosted by Bob Cooper.

NOTE: In the event of program scheduling changes the appropriate notices will be posted on TV channel 10 (our 'Message Channel') and mention of those changes will also be made during the **'Today At SPTS'** television program **each** morning (Friday, Saturday and Sunday).

ABOUT THE MANUALS

BACKGROUND ON MANUALS AVAILABLE

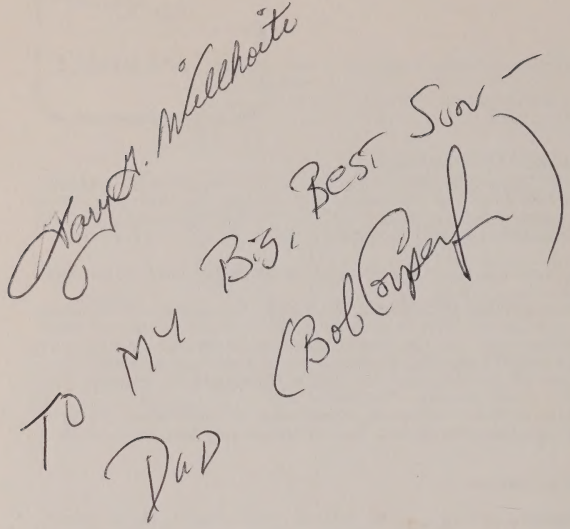
Each registrant at SPTS is entitled to his or her choice of **any two of the STT manuals available at SPTS San Jose** as part of the registration package/fee. With your name badge (which MUST be worn at all times to gain entry to exhibit and meeting areas) and program you receive a special sheet which provides a choice of the manuals you wish.

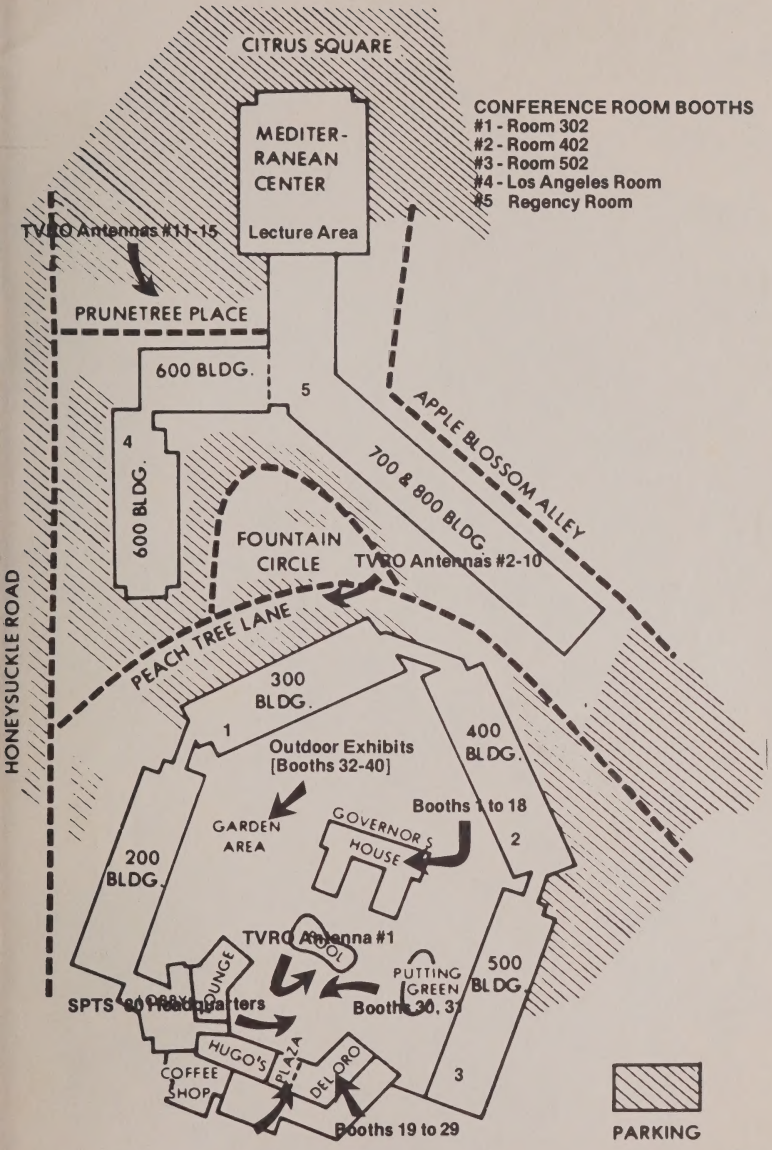
1) **Make sure** your name and city/town plus state is **correctly shown** on the sheet (**colored yellow**).
2) In the STT booth area (**Booth #32**) you will find the STT Manuals available. **Check off** on your yellow sheet the TWO manuals you wish to take as part of your registration, **sign** the sheet, and turn it in. You will be given the **two** manuals you have selected. **In the event STT runs out of a certain manual you have selected**, it will mailed to you July 9th from Arcadia, Oklahoma. **Be sure in this instance** your complete mailing address appears on the yellow form.
3) You may **purchase** additional Manuals, Handbooks, Wallcharts and copies of Coop's Satellite Digest **anytime after 12 noon on Friday, July 4th** at the same STT booth.

The manuals to be selected include:

1) **HOWARD TERMINAL MANUAL** - The 'original' manual by H. Taylor Howard that set this industry off and running with its own receiver design. Includes bi-polar LNA and general discussion of home TVRO system.
2) **SWAN SPHERICAL TVRO ANTENNA MANUAL** - Oliver Swan's innovative work on low cost multi satellite visibility TVRO antennas detailed. Commercial designs of this antenna are very evident at SPTS San Jose!
3) **WASHBURN TVRO RECEIVER MANUAL** - a highly sophisticated TVRO receiver with remote control and antenna polarization switching system married into a single unit by Clyde Washburn.
4) **THE SATELLITE NAVIGATOR MANUAL** - Stephen Gibson's brand new works that makes everybody an expert on locating geostationary satellites plus covers in great detail antenna mounting systems with special emphasis on motorized mounting systems including one controlled by a home micro-computer!
5) **The NELSON PARABOLIC ANTENNA MANUAL** - Nelson Ethier's new manual that tells you how to build one or a thousand low cost, high performance 10 or 12 foot parabolic antennas with mount and feed.
6) **COOP'S SATELLITE OPERATIONS MANUAL** - How and where to find those secret services transmitted via satellite, how to tune in Molniya and international birds, what to do when something quits and much more on day to day peak performance operations.
7) **COLEMAN TD-2 CONVERSION MANUAL** - the 'original works' of Robert Coleman detailing how you take used, surplus equipment for a few hundred dollars and turn it into a working home satellite system. Plus, innovative do-it-yourself design on GaAs-FET LNA systems.

SEMINAR NOTES:




CITRUS SQUARE
MEDITER-RANEAN CENTER
Lecture Area
CONFERENCE ROOM BOOTHS
#1 - Room 302
#2 - Room 402
#3 - Room 502
#4 - Los Angeles Room
#5 Regency Room
TVRO Antennas #11-15
PRUNETREE PLACE
600 BLDG.
5
4
600 BLDG.
APPLE BLOSSOM ALLEY
700 & 800 BLDG.
FOUNTAIN CIRCLE
TVRO Antennas #2-10
HONEYSUCKLE ROAD
PEACH TREE LANE
300 BLDG.
1
Outdoor Exhibits [Booths 32-40]
400 BLDG.
Booths 1 to 18
GARDEN AREA
GOVERNOR'S HOUSE
2
200 BLDG.
TVRO Antenna #1
POOL
LOUNGE
PUTTING GREEN
500 BLDG.
SPTS Headquarters
Booths 30, 31
HUGO'S
PLAZA
DEL ORO
COFFEE SHOP
3
Booths 19 to 29
PARKING